

Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

Claims 1-286 (Canceled)

287. (Currently Amended) An isolated polynucleotide comprising a nucleic acid which encodes a polypeptide comprising an amino acid sequence at least 90% identical to amino acids 1 to 360 of SEQ ID NO:2;
wherein said polypeptide induces apoptosis binds TNF related apoptosis inducing ligand (TRAIL).

288. (Previously Presented) The polynucleotide of claim 287, wherein said amino acid sequence is at least 95% identical to amino acids 1 to 360 of SEQ ID NO:2.

289. (Currently Amended) The polynucleotide of claim 287, wherein said polypeptide binds TNF-related apoptosis-inducing ligand (TRAIL) induces apoptosis.

290. (Previously Presented) The polynucleotide of claim 287, further comprising a heterologous polynucleotide.

291. (Previously Presented) The polynucleotide of claim 290, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

292. (Previously Presented) The polynucleotide of claim 291, wherein said heterologous polypeptide comprises an immunoglobulin Fc region.

293. (Previously Presented) The polynucleotide of claim 292, wherein said immunoglobulin Fc region is a human immunoglobulin Fc region.

294. (Previously Presented) A method of producing a vector that comprises inserting the polynucleotide of claim 287 into a vector.

295. (Previously Presented) A vector comprising the polynucleotide of claim 287.

296. (Previously Presented) The vector of claim 295, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

297. (Previously Presented) A host cell comprising the polynucleotide of claim 287.

298. (Previously Presented) The host cell of claim 297, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

299. (Previously Presented) A method of producing the polypeptide encoded by the polynucleotide of claim 287, comprising culturing a host cell comprising said

polynucleotide under conditions such that said polypeptide is expressed, and recovering said polypeptide.

300. (Allowed) An isolated polynucleotide comprising a first nucleic acid at least 90% identical to a second nucleic acid encoding amino acids 1 to 360 of SEQ ID NO:2;

wherein said first nucleic acid hybridizes to the complement of nucleotides 133 to 1362 of SEQ ID NO:1 under conditions comprising:

- (a) incubating at 42°C in a solution consisting of 50% formamide, 5x SSC, 50 mM sodium phosphate (pH 7.6), 5x Denhardt's solution, 10% dextran sulfate, and 20 µg/ml denatured, sheared salmon sperm DNA; and
- (b) washing at 65°C in a solution consisting of 0.1x SSC.

301. (Allowed) The polynucleotide of claim 300, wherein said first nucleic acid is at least 95% identical to said second nucleic acid.

302. (Allowed) The polynucleotide of claim 300, wherein said second nucleic acid encodes amino acids -50 to 360 of SEQ ID NO:2.

303. (Allowed) The polynucleotide of claim 302, wherein said second nucleic acid encodes amino acids -51 to 360 of SEQ ID NO:2.

304. (Allowed) The polynucleotide of claim 303, wherein said second nucleic acid is SEQ ID NO:1.

305. (Allowed) The polynucleotide of claim 300, wherein said first nucleic acid encodes a polypeptide which binds TRAIL.

306. (Allowed) The polynucleotide of claim 300, wherein said first nucleic acid encodes a polypeptide which induces apoptosis.

307. (Allowed) The polynucleotide of claim 300, further comprising a heterologous polynucleotide.

308. (Allowed) The polynucleotide of claim 307, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

309. (Allowed) The polynucleotide of claim 308, wherein said heterologous polypeptide comprises an immunoglobulin Fc region.

310. (Allowed) The polynucleotide of claim 309, wherein said immunoglobulin Fc region is a human immunoglobulin Fc region.

311. (Allowed) A method of producing a vector that comprises inserting the polynucleotide of claim 300 into a vector.

312. (Allowed) A vector comprising the polynucleotide of claim 300.

313. (Allowed) The vector of claim 312, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

314. (Allowed) A host cell comprising the polynucleotide of claim 300.

315. (Allowed) The host cell of claim 314, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

316. (Allowed) A host cell comprising the polynucleotide of claim 305.

317. (Allowed) The host cell of claim 316, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

318. (Allowed) A method of producing the polypeptide encoded by the polynucleotide of claim 305, comprising culturing a host cell comprising said polynucleotide under conditions such that said polypeptide is expressed, and recovering said polypeptide.

319. (Previously Presented) An isolated polynucleotide comprising a nucleic acid which encodes amino acids 1 to 360 of SEQ ID NO:2.

320. (Previously Presented) The polynucleotide of claim 319, which comprises nucleotides 283 to 1362 of SEQ ID NO:1.

321. (Previously Presented) The polynucleotide of claim 319, wherein said nucleic acid encodes amino acids -50 to 360 of SEQ ID NO:2.

322. (Previously Presented) The polynucleotide of claim 321, which comprises nucleotides 133 to 1362 of SEQ ID NO:1.

323. (Canceled).

324. (Currently Amended) The polynucleotide of claim 322 323, which comprises nucleotides 130 to 1362 of SEQ ID NO:1.

325. (Canceled).

326. (Previously Presented) The polynucleotide of claim 319, which encodes a polypeptide which binds TRAIL.

327. (Previously Presented) The polynucleotide of claim 319, which encodes a polypeptide which induces apoptosis.

328. (Previously Presented) The polynucleotide of claim 319, further comprising a heterologous polynucleotide.

329. (Previously Presented) The polynucleotide of claim 328, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

330. (Previously Presented) The polynucleotide of claim 329, wherein said heterologous polypeptide comprises an immunoglobulin Fc region.

331. (Previously Presented) The polynucleotide of claim 330, wherein said immunoglobulin Fc region is a human immunoglobulin Fc region.

332. (Previously Presented) A method of producing a vector that comprises inserting the polynucleotide of claim 319 into a vector.

333. (Previously Presented) A vector comprising the polynucleotide of claim 319.

334. (Previously Presented) The vector of claim 333, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

335. (Previously Presented) A host cell comprising the polynucleotide of claim 319.

336. (Previously Presented) The host cell of claim 335, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

337. (Previously Presented) A host cell comprising the polynucleotide of claim 326.

338. (Previously Presented) The host cell of claim 337, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

339. (Previously Presented) A method of producing the polypeptide encoded by the polynucleotide of claim 326, comprising culturing a host cell comprising said polynucleotide under conditions such that said polypeptide is expressed, and recovering said polypeptide.

340. (Allowed) An isolated polynucleotide comprising a first nucleic acid at least 90% identical to a second nucleic acid encoding amino acids 134 to 157 of SEQ ID NO:2;

wherein said first nucleic acid hybridizes to the complement of nucleotides 130 to 1362 of SEQ ID NO:1 under conditions comprising:

- (a) incubating overnight at 42°C in a solution consisting of 50% formamide, 5x SSC, 50 mM sodium phosphate (pH 7.6), 5x Denhardt's solution, 10% dextran sulfate, and 20 µg/ml denatured, sheared salmon sperm DNA; and
- (b) washing at 65°C in a solution consisting of 0.1x SSC.

341. (Allowed) The polynucleotide of claim 340, wherein said first nucleic acid is at least 95% identical to said second nucleic acid.

342. (Allowed) The polynucleotide of claim 340, further comprising a heterologous polynucleotide.

343. (Allowed) The polynucleotide of claim 342, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

344. (Allowed) The polynucleotide of claim 343, wherein said heterologous polypeptide comprises an immunoglobulin Fc region.

345. (Allowed) The polynucleotide of claim 344, wherein said immunoglobulin Fc region is a human immunoglobulin Fc region.

346. (Allowed) A method of producing a vector that comprises inserting the polynucleotide of claim 340 into a vector.

347. (Allowed) A vector comprising the polynucleotide of claim 340.

348. (Allowed) The vector of claim 347, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

349. (Allowed) A host cell comprising the polynucleotide of claim 340.

350. (Allowed) The host cell of claim 349, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

351. (Previously Presented) An isolated polynucleotide comprising a nucleic acid which encodes amino acids 134 to 157 of SEQ ID NO:2.

352. (Previously Presented) The polynucleotide of claim 351, which comprises nucleotides 682 to 753 of SEQ ID NO:1.

353. (Previously Presented) The polynucleotide of claim 351, further comprising a heterologous polynucleotide.

354. (Previously Presented) The polynucleotide of claim 353, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

355. (Previously Presented) The polynucleotide of claim 354, wherein said heterologous polypeptide comprises an immunoglobulin Fc region.

356. (Previously Presented) The polynucleotide of claim 355, wherein said immunoglobulin Fc region is a human immunoglobulin Fc region.

357. (Previously Presented) A method of producing a vector that comprises inserting the polynucleotide of claim 351 into a vector.

358. (Previously Presented) A vector comprising the polynucleotide of claim 351.

359. (Previously Presented) The vector of claim 358, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

360. (Previously Presented) A host cell comprising the polynucleotide of claim 351.

361. (Previously Presented) The host cell of claim 360, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

362. (Amended) An isolated polynucleotide comprising a nucleic acid which encodes a polypeptide fragment at least 90% identical to amino acids 158 to 360 of SEQ ID NO:2; and

wherein a DR5 variant polypeptide consisting of amino acids 1 to 360 of SEQ ID NO:2, with the exception that amino acids 158-360 of SEQ ID NO:2 are deleted and replaced with said polypeptide fragment, induces apoptosis ~~in vitro when over expressed in human breast carcinoma cells.~~

363. (Previously Presented) The polynucleotide of claim 362, wherein said polypeptide fragment is at least 95% identical to amino acids 158 to 360 of SEQ ID NO:2.

364. (Previously Presented) The polynucleotide of claim 362, further comprising a heterologous polynucleotide.

365. (Previously Presented) The polynucleotide of claim 364, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

366. (Previously Presented) The polynucleotide of claim 365, wherein said heterologous polypeptide comprises an immunoglobulin Fc region.

367. (Previously Presented) The polynucleotide of claim 366, wherein said immunoglobulin Fc region is a human immunoglobulin Fc region.

368. (Previously Presented) A method of producing a vector that comprises inserting the polynucleotide of claim 362 into a vector.

369. (Previously Presented) A vector comprising the polynucleotide of claim 362.

370. (Previously Presented) The vector of claim 369, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

371. (Previously Presented) A host cell comprising the polynucleotide of claim 362.

372. (Previously Presented) The host cell of claim 371, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

373. (Previously Presented) A method of producing the polypeptide fragment encoded by the polynucleotide of claim 362, comprising culturing a host cell comprising said polynucleotide under conditions such that said polypeptide fragment is expressed, and recovering said polypeptide fragment.

374. (Allowed) An isolated polynucleotide comprising a first nucleic acid at least 90% identical to a second nucleic acid encoding amino acids 158 to 360 of SEQ ID NO:2;

wherein said first nucleic acid hybridizes to the complement of nucleotides 133 to 1362 of SEQ ID NO:1 under conditions comprising:

- (a) incubating at 42°C in a solution consisting of 50% formamide, 5x SSC, 50 mM sodium phosphate (pH 7.6), 5x Denhardt's solution, 10% dextran sulfate, and 20 µg/ml denatured, sheared salmon sperm DNA; and
- (b) washing at 65°C in a solution consisting of 0.1x SSC.

375. (Allowed) The polynucleotide of claim 374, wherein said first nucleic acid is at least 95% identical to said second nucleic acid.

376. (Amended) The polynucleotide of claim 374, wherein said first nucleic acid encodes a polypeptide fragment; and wherein a DR5 variant polypeptide consisting of amino acids 1 to 360 of SEQ ID NO:2, with the exception that amino acids 158-360 of SEQ ID NO:2 are deleted and replaced with said polypeptide fragment, induces apoptosis *in vitro* when over-expressed in human breast carcinoma cells.

377. (Allowed) The polynucleotide of claim 374, further comprising a heterologous polynucleotide.

378. (Allowed) The polynucleotide of claim 377, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

379. (Allowed) The polynucleotide of claim 378, wherein said heterologous polypeptide comprises an immunoglobulin Fc region.

380. (Allowed) The polynucleotide of claim 379, wherein said immunoglobulin Fc region is a human immunoglobulin Fc region.

381. (Allowed) A method of producing a vector that comprises inserting the polynucleotide of claim 374 into a vector.

382. (Allowed) A vector comprising the polynucleotide of claim 374.

383. (Allowed) The vector of claim 382, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

384. (Allowed) A host cell comprising the polynucleotide of claim 374.

385. (Allowed) The host cell of claim 384, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

386. (Allowed) A host cell comprising the polynucleotide of claim 376.

387. (Allowed) The host cell of claim 386, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

388. (Allowed) A method of producing the polypeptide fragment encoded by the polynucleotide of claim 376, comprising culturing a host cell comprising said polynucleotide under conditions such that said polypeptide fragment is expressed, and recovering said polypeptide fragment.

389. (Previously Presented) An isolated polynucleotide comprising a nucleic acid which encodes amino acids 158 to 360 of SEQ ID NO:2.

390. (Previously Presented) The polynucleotide of claim 389, which comprises nucleotides 754 to 1362 of SEQ ID NO:1.

391. (Amended) The polynucleotide of claim 389, which encodes a polypeptide fragment, wherein a DR5 polypeptide consisting of amino acids 1 to 360 of SEQ ID NO:2, with the exception that amino acids 158-360 of SEQ ID NO:2 are deleted and replaced with said polypeptide fragment, induces apoptosis *in vitro* when overexpressed in human breast carcinoma cells.

392. (Previously Presented) The polynucleotide of claim 389, further comprising a heterologous polynucleotide.

393. (Previously Presented) The polynucleotide of claim 392, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

394. (Previously Presented) The polynucleotide of claim 393, wherein said heterologous polypeptide comprises an immunoglobulin Fc region.

395. (Previously Presented) The polynucleotide of claim 394, wherein said immunoglobulin Fc region is a human immunoglobulin Fc region.

396. (Previously Presented) A method of producing a vector that comprises inserting the polynucleotide of claim 389 into a vector.

397. (Previously Presented) A vector comprising the polynucleotide of claim 389.

398. (Previously Presented) The vector of claim 397, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

399. (Previously Presented) A host cell comprising the polynucleotide of claim 389.

400. (Previously Presented) The host cell of claim 399, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

401. (Previously Presented) A host cell comprising the polynucleotide of claim 391.

402. (Previously Presented) The host cell of claim 401, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

403. (Previously Presented) A method of producing the polypeptide fragment encoded by the polynucleotide of claim 391, comprising culturing a host cell comprising said polynucleotide under conditions such that said polypeptide fragment is expressed, and recovering said polypeptide fragment.

404. (Amended) An isolated polynucleotide comprising a nucleic acid which encodes a polypeptide fragment at least 90% identical to amino acids 273 to 340 of SEQ ID NO:2;

wherein a DR5 variant polypeptide consisting of amino acids 1 to 360 of SEQ ID NO:2, with the exception that amino acids 273-340 of SEQ ID NO:2 are deleted and replaced with said polypeptide fragment, induces apoptosis ~~in vitro when ever expressed in human breast carcinoma cells.~~

405. (Previously Presented) The polynucleotide of claim 404, wherein said polypeptide fragment is at least 95% identical to amino acids 273 to 340 of SEQ ID NO:2.

406. (Previously Presented) The polynucleotide of claim 404, further comprising a heterologous polynucleotide.

407. (Previously Presented) The polynucleotide of claim 406, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

408. (Previously Presented) The polynucleotide of claim 407, wherein said heterologous polypeptide comprises an immunoglobulin Fc region.

409. (Previously Presented) The polynucleotide of claim 408, wherein said immunoglobulin Fc region is a human immunoglobulin Fc region.

410. (Previously Presented) A method of producing a vector that comprises inserting the polynucleotide of claim 404 into a vector.

411. (Previously Presented) A vector comprising the polynucleotide of claim 404.

412. (Previously Presented) The vector of claim 411, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

413. (Previously Presented) A host cell comprising the polynucleotide of claim 404.

414. (Previously Presented) The host cell of claim 413, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

415. (Previously Presented) A method of producing the polypeptide fragment encoded by the polynucleotide of claim 404, comprising culturing a host cell comprising said polynucleotide under conditions such that said polypeptide fragment is expressed, and recovering said polypeptide fragment.

416. (Allowed) An isolated polynucleotide comprising a first nucleic acid at least 90% identical to a second nucleic acid encoding amino acids 273 to 340 of SEQ ID NO:2;

wherein said first nucleic acid hybridizes to the complement of nucleotides 133 to 1362 of SEQ ID NO:1 under conditions comprising:

(a) incubating at 42°C in a solution consisting of 50% formamide, 5x SSC, 50 mM sodium phosphate (pH 7.6), 5x Denhardt's solution, 10% dextran sulfate, and 20 µg/ml denatured, sheared salmon sperm DNA; and

(b) washing at 65°C in a solution consisting of 0.1x SSC.

417. (Allowed) The polynucleotide of claim 416, wherein said first nucleic acid is at least 95% identical to said second nucleic acid.

418. (Amended) The polynucleotide of claim 416, wherein said first nucleic acid encodes a polypeptide fragment, and wherein a DR5 variant polypeptide consisting of amino acids 1 to 360 of SEQ ID NO:2, with the exception that amino acids 273-340 of SEQ ID NO:2 are deleted and replaced with said polypeptide fragment, induces apoptosis *in vitro* when over expressed in human breast carcinoma cells.

419. (Allowed) The polynucleotide of claim 416, further comprising a heterologous polynucleotide.

420. (Allowed) The polynucleotide of claim 419, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

421. (Allowed) The polynucleotide of claim 420, wherein said heterologous polypeptide comprises an immunoglobulin Fc region.

422. (Allowed) The polynucleotide of claim 421, wherein said immunoglobulin Fc region is a human immunoglobulin Fc region.

423. (Allowed) A method of producing a vector that comprises inserting the polynucleotide of claim 416 into a vector.

424. (Allowed) A vector comprising the polynucleotide of claim 416.

425. (Allowed) The vector of claim 424, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

426. (Allowed) A host cell comprising the polynucleotide of claim 416.

427. (Allowed) The host cell of claim 426, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

428. (Allowed) A host cell comprising the polynucleotide of claim 418.

429. (Allowed) The host cell of claim 428, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

430. (Allowed) A method of producing the polypeptide fragment encoded by the polynucleotide of claim 418, comprising culturing a host cell comprising said polynucleotide under conditions such that said polypeptide fragment is expressed, and recovering said polypeptide fragment.

431. (Previously Presented) An isolated polynucleotide comprising a nucleic acid which encodes amino acids 273 to 340 of SEQ ID NO:2.

432. (Previously Presented) The polynucleotide of claim 431, which comprises nucleotides 1099 to 1302 of SEQ ID NO:1.

433. (Canceled)

434. (Previously Presented) The polynucleotide of claim 431, further comprising a heterologous polynucleotide.

435. (Previously Presented) The polynucleotide of claim 434, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

436. (Previously Presented) The polynucleotide of claim 435, wherein said heterologous polypeptide comprises an immunoglobulin Fc region.

437. (Previously Presented) The polynucleotide of claim 436, wherein said immunoglobulin Fc region is a human immunoglobulin Fc region.

438. (Previously Presented) A method of producing a vector that comprises inserting the polynucleotide of claim 431 into a vector.

439. (Previously Presented) A vector comprising the polynucleotide of claim 431.

440. (Previously Presented) The vector of claim 439, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

441. (Previously Presented) A host cell comprising the polynucleotide of claim 431.

442. (Previously Presented) The host cell of claim 441, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

443-445 (Canceled)

446. (Currently Amended) An isolated polynucleotide comprising a nucleic acid which encodes a polypeptide comprising an amino acid sequence at least 90% identical to the mature amino acid sequence encoded by the cDNA clone in ATCC Deposit No. 97920;
wherein said polypeptide induces apoptosis binds TRAIL.

447. (Previously Presented) The polynucleotide of claim 446, wherein said amino acid sequence is at least 95% identical to the mature amino acid sequence encoded by the cDNA clone in ATCC Deposit No. 97920.

448. (Currently Amended) The polynucleotide of claim 446, wherein said polypeptide binds TRAIL induces apoptosis.

449. (Previously Presented) The polynucleotide of claim 446, further comprising a heterologous polynucleotide.

450. (Previously Presented) The polynucleotide of claim 449, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

451. (Previously Presented) The polynucleotide of claim 450, wherein said heterologous polypeptide comprises an immunoglobulin Fc region.

452. (Previously Presented) The polynucleotide of claim 451, wherein said immunoglobulin Fc region is a human immunoglobulin Fc region.

453. (Previously Presented) A method of producing a vector that comprises inserting the polynucleotide of claim 446 into a vector.

454. (Previously Presented) A vector comprising the polynucleotide of claim 446.

455. (Previously Presented) The vector of claim 454, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

456. (Previously Presented) A host cell comprising the polynucleotide of claim 446.

457. (Previously Presented) The host cell of claim 456, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

458. (Previously Presented) A method of producing the polypeptide encoded by the polynucleotide of claim 446, comprising culturing a host cell comprising said polynucleotide under conditions such that said polypeptide is expressed, and recovering said polypeptide.

459. (Allowed) An isolated polynucleotide comprising a first nucleic acid at least 90% identical to a second nucleic acid encoding the mature amino acid sequence encoded by the cDNA clone in ATCC Deposit No. 97920;

wherein said first nucleic acid hybridizes to the complement of nucleotides 133 to 1362 of SEQ ID NO:1 under conditions comprising:

- (a) incubating at 42°C in a solution consisting of 50% formamide, 5x SSC, 50 mM sodium phosphate (pH 7.6), 5x Denhardt's solution, 10% dextran sulfate, and 20 µg/ml denatured, sheared salmon sperm DNA; and
- (b) washing at 65°C in a solution consisting of 0.1x SSC.

460. (Allowed) The polynucleotide of claim 459, wherein said first nucleic acid is at least 95% identical to said second nucleic acid.

461. (Allowed) The polynucleotide of claim 459, wherein said second nucleic acid encodes the complete amino acid sequence encoded by the cDNA clone in ATCC Deposit No. 97920.

462. (Allowed) The polynucleotide of claim 459, wherein said first nucleic acid encodes a polypeptide which binds TRAIL.

463. (Allowed) The polynucleotide of claim 459, wherein said first nucleic acid encodes a polypeptide which induces apoptosis.

464. (Allowed) The polynucleotide of claim 459, further comprising a heterologous polynucleotide.

465. (Allowed) The polynucleotide of claim 464, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

466. (Allowed) The polynucleotide of claim 465, wherein said heterologous polypeptide comprises an immunoglobulin Fc region.

467. (Allowed) The polynucleotide of claim 466, wherein said immunoglobulin Fc region is a human immunoglobulin Fc region.

468. (Allowed) A method of producing a vector that comprises inserting the polynucleotide of claim 459 into a vector.

469. (Allowed) A vector comprising the polynucleotide of claim 459.

470. (Allowed) The vector of claim 469, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

471. (Allowed) A host cell comprising the polynucleotide of claim 459.

472. (Allowed) The host cell of claim 471, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

473. (Allowed) A host cell comprising the polynucleotide of claim 462.

474. (Allowed) The host cell of claim 473, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

475. (Allowed) A method of producing the polypeptide encoded by the polynucleotide of claim 462 comprising culturing a host cell comprising said polynucleotide under conditions such that said polypeptide is expressed, and recovering said polypeptide.

476. (Previously Presented) An isolated polynucleotide comprising a nucleic acid which encodes the mature amino acid sequence encoded by the cDNA clone in ATCC Deposit No. 97920.

477. (Previously Presented) The polynucleotide of claim 476, wherein said nucleic acid encodes the complete amino acid sequence encoded by the cDNA clone in ATCC Deposit No. 97920.

478. (Previously Presented) The polynucleotide of claim 476, wherein said nucleic acid encodes a polypeptide which binds TRAIL.

479. (Previously Presented) The polynucleotide of claim 476, wherein said nucleic acid encodes a polypeptide which induces apoptosis.

480. (Previously Presented) The polynucleotide of claim 476, further comprising a heterologous polynucleotide.

481. (Previously Presented) The polynucleotide of claim 480, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

482. (Previously Presented) The polynucleotide of claim 481, wherein said heterologous polypeptide comprises an immunoglobulin Fc region.

483. (Previously Presented) The polynucleotide of claim 482, wherein said immunoglobulin Fc region is a human immunoglobulin Fc region.

484. (Previously Presented) A method of producing a vector that comprises inserting the polynucleotide of claim 476 into a vector.

485. (Previously Presented) A vector comprising the polynucleotide of claim 476.

486. (Previously Presented) The vector of claim 485, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

487. (Previously Presented) A host cell comprising the polynucleotide of claim 476.

488. (Previously Presented) The host cell of claim 487, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

489. (Previously Presented) A host cell comprising the polynucleotide of claim 478.

490. (Previously Presented) The host cell of claim 489, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

491. (Previously Presented) A method of producing the polypeptide encoded by the polynucleotide of claim 476 comprising culturing a host cell comprising said polynucleotide under conditions such that said polypeptide is expressed, and recovering said polypeptide.

492-506 (Canceled).

507. (Currently Amended) An isolated polynucleotide comprising a nucleic acid which encodes at least 50 contiguous amino acids of amino acids 1 to 133 360 of SEQ ID NO:2;

wherein said at least 50 contiguous amino acids bind an antibody with specificity for the polypeptide consisting of amino acids 1 to 360 of SEQ ID NO:2.

508. (Previously Presented) The polynucleotide of claim 507, further comprising a heterologous polynucleotide.

509. (Previously Presented) The polynucleotide of claim 508, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

510. (Previously Presented) The polynucleotide of claim 509, wherein said heterologous polypeptide comprises an immunoglobulin Fc region.

511. (Previously Presented) The polynucleotide of claim 510, wherein said immunoglobulin Fc region is a human immunoglobulin Fc region.

512. (Previously Presented) A method of producing a vector that comprises inserting the polynucleotide of claim 507 into a vector.

513. (Previously Presented) A vector comprising the polynucleotide of claim 507.

514. (Previously Presented) The vector of claim 513, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

515. (Previously Presented) A host cell comprising the polynucleotide of claim 507.

516. (Previously Presented) The host cell of claim 515, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

517. (Previously Presented) A method of producing a polypeptide comprising the at least 50 contiguous amino acids encoded by the polynucleotide of claim 507 comprising culturing a host cell comprising said polynucleotide under conditions such that said polypeptide is expressed, and recovering said polypeptide.

518-534 (Canceled)

535-552 (Canceled)

553. (Currently Amended) An isolated polynucleotide comprising a nucleic acid which encodes a polypeptide comprising an amino acid sequence at least 90% identical to amino acids 1 to 133 of SEQ ID NO:2;

wherein said polypeptide binds an antibody with specificity for the polypeptide of amino acids 1 to 360 of SEQ ID NO:2 binds TRAIL.

554. (Previously Presented) The polynucleotide of claim 553, wherein said amino acid sequence is at least 95% identical to amino acids 1 to 133 of SEQ ID NO:2.

555. (Previously Presented) The polynucleotide of claim 553, further comprising a heterologous polynucleotide.

556. (Previously Presented) The polynucleotide of claim 555, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

557. (Previously Presented) The polynucleotide of claim 556, wherein said heterologous polypeptide comprises an immunoglobulin Fc region.

558. (Previously Presented) The polynucleotide of claim 557, wherein said immunoglobulin Fc region is a human immunoglobulin Fc region.

559. (Previously Presented) A method of producing a vector that comprises inserting the polynucleotide of claim 553 into a vector.

560. (Previously Presented) A vector comprising the polynucleotide of claim 553.

561. (Previously Presented) The vector of claim 560, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

562. (Previously Presented) A host cell comprising the polynucleotide of claim 553.

563. (Previously Presented) The host cell of claim 562, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

564. (Previously Presented) A method of producing the polypeptide encoded by the polynucleotide of claim 553 comprising culturing a host cell comprising said polynucleotide under conditions such that said polypeptide is expressed, and recovering said polypeptide.

565. (Previously Presented) An isolated polynucleotide which encodes amino acids 1 to 133 of SEQ ID NO:2.

566. (Previously Presented) The polynucleotide of claim 565, which comprises nucleotides 283 to 681 of SEQ ID NO:1.

567. (Previously Presented) The polynucleotide of claim 565, wherein said nucleic acid encodes a polypeptide which binds TRAIL.

568. (Previously Presented) The polynucleotide of claim 565, further comprising a heterologous polynucleotide.

569. (Previously Presented) The polynucleotide of claim 568, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

570. (Previously Presented) The polynucleotide of claim 569, wherein said heterologous polypeptide comprises an immunoglobulin Fc region.

571. (Previously Presented) The polynucleotide of claim 570, wherein said immunoglobulin Fc region is a human immunoglobulin Fc region.

572. (Previously Presented) A method of producing a vector that comprises inserting the polynucleotide of claim 565 into a vector.

573. (Previously Presented) A vector comprising the polynucleotide of claim 565.

574. (Previously Presented) The vector of claim 573, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

575. (Previously Presented) A host cell comprising the polynucleotide of claim 565.

576. (Previously Presented) The host cell of claim 575, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

577. (Previously Presented) A host cell comprising the polynucleotide of claim 567.

578. (Previously Presented) The host cell of claim 577, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

579. (Previously Presented) A method of producing a polypeptide comprising the amino acids encoded by the polynucleotide of claim 565, comprising culturing a host cell comprising said polynucleotide under conditions such that said polypeptide is expressed, and recovering said polypeptide.

580. (Currently Amended) An isolated polynucleotide comprising a nucleic acid which encodes a protein comprising a polypeptide selected from the group consisting of:

~~a polypeptide consisting of amino acids 11 to 59 of SEQ ID NO:2;~~

a polypeptide consisting of amino acids 68 to 103 of SEQ ID NO:2;

a polypeptide consisting of amino acids 173 to 220 of SEQ ID NO:2; and

a polypeptide consisting of amino acids 224 to 319 of SEQ ID NO:2;

wherein said polypeptide binds an antibody with specificity for the polypeptide consisting of amino acids 1 to 360 of SEQ ID NO:2.

581. (Currently Amended) ~~The~~ An isolated polynucleotide of claim 580, wherein said nucleic acid comprising a nucleic acid which encodes amino acids 11 to 59 of SEQ ID NO:2.

582. (Previously Presented) The polynucleotide of claim 580, wherein said nucleic acid encodes amino acids 68 to 103 of SEQ ID NO:2.

583. (Previously Presented) The polynucleotide of claim 580, wherein said nucleic acid encodes amino acids 173 to 220 of SEQ ID NO:2.

584. (Previously Presented) The polynucleotide of claim 580, wherein said nucleic acid encodes amino acids 224 to 319 of SEQ ID NO:2.

585. (Previously Presented) The polynucleotide of claim 580, further comprising a heterologous polynucleotide.

586. (Previously Presented) The polynucleotide of claim 585, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

587. (Previously Presented) The polynucleotide of claim 586, wherein said heterologous polypeptide comprises an immunoglobulin Fc region.

588. (Previously Presented) The polynucleotide of claim 587, wherein said immunoglobulin Fc region is a human immunoglobulin Fc region.

589. (Previously Presented) A method of producing a vector that comprises inserting the polynucleotide of claim 580 into a vector.

590. (Previously Presented) A vector comprising the polynucleotide of claim 580.

591. (Previously Presented) The vector of claim 590, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

592. (Previously Presented) A host cell comprising the polynucleotide of claim 580.

593. (Previously Presented) The host cell of claim 592, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

594. (Previously Presented) A method of producing the protein encoded by the polynucleotide of claim 580 comprising culturing a host cell comprising said polynucleotide under conditions such that said protein is expressed, and recovering said protein.

595. (Currently Amended) An isolated polynucleotide comprising a nucleic acid which hybridizes to the complement of nucleotides 284 to 1362 of SEQ ID NO:1 under conditions comprising:

(a) incubating overnight at 42°C in a solution consisting of 50% formamide, 5x SSC, 50 mM sodium phosphate (pH 7.6), 5x Denhardt's solution, 10% dextran sulfate, and 20 µg/ml denatured, sheared salmon sperm DNA; and

(b) washing at 65°C in a solution consisting of 0.1x SSC;
wherein said nucleic acid encodes a polypeptide selected from the group
consisting of:
~~a polypeptide which binds TRAIL, and~~
~~a polypeptide which induces apoptosis.~~

596. (Currently Amended) The polynucleotide of claim 595, wherein said
polypeptide nucleic acid encodes a polypeptide which binds TRAIL.

597. (Canceled)

598. (Previously Presented) The polynucleotide of claim 595, further
comprising a heterologous polynucleotide.

599. (Previously Presented) The polynucleotide of claim 598, wherein said
heterologous polynucleotide encodes a heterologous polypeptide.

600. (Previously Presented) The polynucleotide of claim 599, wherein said
heterologous polypeptide comprises an immunoglobulin Fc region.

601. (Previously Presented) The polynucleotide of claim 600, wherein said
immunoglobulin Fc region is a human immunoglobulin Fc region.

602. (Previously Presented) A method of producing a vector that comprises inserting the polynucleotide of claim 595 into a vector.

603. (Previously Presented) A vector comprising the polynucleotide of claim 595.

604. (Previously Presented) The vector of claim 603, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

605. (Previously Presented) A host cell comprising the polynucleotide of claim 595.

606. (Previously Presented) The host cell of claim 605, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

607. (Previously Presented) A method of producing the polypeptide encoded by the polynucleotide of claim 595 comprising culturing a host cell comprising said polynucleotide under conditions such that said polypeptide is expressed, and recovering said polypeptide.

608. (Currently Amended) An isolated polynucleotide comprising a nucleic acid which encodes a polypeptide fragment comprising 50 contiguous amino acids within amino acids 1 to 133 1 to 360 of SEQ ID NO:2.

609-610 (Canceled)

611. (Previously Presented) The polynucleotide of claim 608, further comprising a heterologous polynucleotide.

612. (Previously Presented) The polynucleotide of claim 611, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

613. (Previously Presented) The polynucleotide of claim 612, wherein said heterologous polypeptide comprises an immunoglobulin Fc region.

614. (Previously Presented) The polynucleotide of claim 613, wherein said immunoglobulin Fc region is a human immunoglobulin Fc region.

615. (Previously Presented) A method of producing a vector that comprises inserting the polynucleotide of claim 608 into a vector.

616. (Previously Presented) A vector comprising the polynucleotide of claim 608.

617. (Previously Presented) The vector of claim 616, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

618. (Previously Presented) A host cell comprising the polynucleotide of claim 608.

619. (Previously Presented) The host cell of claim 618, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

620-621 (Canceled)

622. (Previously Presented) A method of producing the polypeptide fragment encoded by the polynucleotide of claim 608 comprising culturing a host cell comprising said polynucleotide under conditions such that said polypeptide fragment is expressed, and recovering said polypeptide fragment, wherein said polypeptide fragment binds an antibody with specificity for a polypeptide consisting of amino acids 1 to 360 of SEQ ID NO:2.

623. (New) The polynucleotide of claim 581, further comprising a heterologous polynucleotide.

624. (New) The polynucleotide of claim 623, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

625. (New) The polynucleotide of claim 624, wherein said heterologous polypeptide comprises an immunoglobulin Fc region.

626. (New) The polynucleotide of claim 625, wherein said immunoglobulin Fc region is a human immunoglobulin Fc region.

627. (New) A method of producing a vector that comprises inserting the polynucleotide of claim 581 into a vector.

628. (New) A vector comprising the polynucleotide of claim 581.

629. (New) The vector of claim 628, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

630. (New) A host cell comprising the polynucleotide of claim 581.

631. (New) The host cell of claim 630, wherein said polynucleotide is operably associated with a heterologous regulatory sequence.

632. (New) A method of producing the protein encoded by the polynucleotide of claim 581 comprising culturing a host cell comprising said polynucleotide under conditions such that said protein is expressed, and recovering said protein.